FRANKFURT
UNIVERSITY
OF APPLIED SCIENCES

"Education is the key to the world" is the motto of the
Frankfurt University of Applied Sciences (Frankfurt UAS).
Internationality, diversity and social responsibility are our values.
Our institution is a place of lifelong learning as well
as an innovative development partner of the region.
Our more than 15,500 students and 970 employees in
teaching, research and central administration are responsible of it.

Faculty 2: Computer Science and Engineering, research group CSI, is looking to fill the following position
as soon as possible and for a **period of three years**:

Research Associate (m/f/d) in the research project „CSI"
PhD position on the topic of „Wi-Fi-Sensing – make your WLAN-Router see!"
(Part-time 65% = 26 hours/week)
Referenz no. 044/2023

Our Channel State Information (CSI) research group explores usage of data generated by
W-LAN communication (IEEE 802.11). Quite diverse applications such as localisation, human activity and
3D pose recognition including skeleton modelling are made possible. For instance, commercially available
W-LAN routers can be used for fall or gesture recognition in the context of e.g. Ambient Assisted Living
(AAL). This so-called Wi-Fi sensing is considered the next disruptive technology with a lot of potential
(see also IEEE 802.11bf).
In the CSI research group, we work together in an interdisciplinary way with the Mixed Reality Lab and
related research groups such as Internet of Things. In addition to traditional algorithms of signal theory,
we mainly use machine learning methods, including Deep Learning (see "Device free human activity and
fall recognition using WiFi channel state information (CSI)" https://doi.org/10.1007/s42486-020-00027-1,
Best Paper Award Springer).

Responsibilities:
Participation in an innovative research project in an interdisciplinary, English-speaking team;
active independent research on machine learning methods
for the analysis of sensor data in the context of CSI;
participation in the development of a suitable hardware and software environment, including openwifi;
coordination with the Mixed Reality Lab;
possibly cooperation with industrial partners;
publications in German and English;
lectures at (inter-) national conferences;
teaching of 2 semester hours per week;
supervision of internships and seminars as well as supervision of Bachelor and Master students;
possibility of scientific exchange and stay in Cádiz through co-operative doctoral studies at the Universidad de Cádiz at the Departamento de Ingeniería Informática,
Escuela Superior de Ingeniería (Spanish not a prerequisite);
alternatively, doctoral studies at the PhD Centre Applied Informatics (PZAI) possible.

Quallifications:
Completed academic university studies (master's degree/diploma) in computer science
or electrical engineering or related fields;
knowledge of mathematics (engineering mathematics, statistics, numerics);
sound experience in at least one relevant programming language (e. g. C/C++, Python). C/C++, Python);
knowledge in the areas of machine learning and signal theory is an advantage, but not a prerequisite;

conceptual and analytical skills as well as being goal-oriented;
ability to independently write scientific publications;
good German and English skills;
confident appearance, ability to work independently and on one's own responsibility as well as commitment and ability to work in a team;
flexibility and a pronounced willingness for subject-related further education.

We offer:
Interesting, creative tasks in a dynamic and varied working environment;
good training and regular feedback as well as an open and friendly working atmosphere;
attractive further training and development opportunities;
adequate wages (annual bonus) as well as other attractive social benefits (trust-based working hours, Landesticket Hessen, pension scheme (VBL), saving schemes);
a secure job at the service of the state of Hesse offering a work-life balance;
an extensive range of social, cultural and sport activities within the university.

The salary is defined according to the **German E13 TV Hessen scale.**

The position is open to all persons, irrespective of gender. The Frankfurt University of Applied Sciences would like to increase the proportion of women in areas in which they are underrepresented and thus applications from women are particularly welcome and will be treated with priority of they have the same qualifications and as long as there are no clear reasons which make a fellow applicant more suitable. Applicants with disabilities will be employed preferentially if equally qualified. As a holder of the "Family-friendly university" certificate, the university takes into account each individual family situation when organising working hours.

We place great importance on protecting your personal data. Therefore, we inform you in accordance with the relevant data protection regulations about the collection, processing and use of your data in the context of your application. You can find further information on the general data protection regulations of the Frankfurt UAS at (only available in German):
https://www.frankfurt-university.de/index.php?id=5184

Do you have any questions regarding this vacancy?
Please contact Prof. Dr. Jörg Schäfer: jschäfer@fb2.fra-uas.de

Applications comprising all usual documents (**one** PDF file) must be sent with **reference to the job advertisement number by 06.04.2023 via email** to bewerbungen@hr.fra-uas.de or via post (please send only **copies** of the documents, since they cannot be returned) to:

Frankfurt University of Applied Sciences
Human Resources
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60318 Frankfurt
www.frankfurt-university.de